

REMARKS

Claims 24-25, 29-37, and 40-45 remain in this application.

CLAIM AMENDMENTS

Independent claims 24, 25 and 45 have been amended as suggested by the Examiner to more particularly define the absorption device. The description of the absorption device in dependent claim 28 has been incorporated into independent claims 24, 25 and 45. Dependent claim 28 has been canceled.

THE CLAIMS

The claims describe an efficient and safe fumigation system for shipping containers. The claims as amended and pending describe a mobile fumigation system that includes a standard size (ISO) general purpose shipping container that serves as a fumigation chamber. A fumigation apparatus provides toxic fumigant to the fumigation chamber. An extraction device removes the toxic fumigant through an absorptive bed of activated charcoal. The activated charcoal is effective for removing toxic fumigants and preventing its release into the atmosphere.

The use of standard size containers provides a single system that be efficiently used in shipping yards. Standard (ISO) shipping containers can be quickly, easily and securely coupled to the fumigation apparatus without requiring special adaptors or connectors. Further, release of toxic fumigant into the environment is prevented by its removal and absorption onto activated charcoal.

ART REJECTIONS

Claims 24, 25 28, 30-37 and 40-45 are not obvious over Otsuki et al. in view of Williamson, Smithyman and Haraguchi.

Otsuki does not describe toxic fumigant or a device to absorb toxic fumigant.

Otsuki does not describe or suggest a mobile fumigation system having an absorptive device that includes activated charcoal as claimed. Otsuki has no reason to include an absorptive device because he does not describe or suggest the use of toxic fumigants. Otsuki clearly and expressly teaches away from the use of a toxic fumigant. In paragraphs 5 and 6, Otsuki makes it clear that toxicity is an issue, and that moving away from the use of a toxic fumigant to kill insects is one of its primary objectives. Paragraph 7 of Otsuki states that a solution to provide carbon dioxide to a container van.

Otsuki's ethylene removal device is not an absorptive device that includes activated charcoal as claimed. It is well known that agricultural produce (especially fruit) expire ethylene. Ethylene can build up over time and cause rapid/excessive ripening. Otsuki teaches a known process of circulating CO₂ with removal of ethylene to prevent its build up. Ethylene is not a toxic fumigant. One of ordinary skill would clearly know that an ethylene removal device would not be the same as an absorptive device that includes activated charcoal as claimed. Since Otsuki describes a system which is not using toxic fumigants, he is not concerned with release of toxic fumigant into the atmosphere.

Williamson does not describe toxic fumigant or a device to absorb toxic fumigant.

Williamson does not describe or suggest a mobile fumigation system with an absorption device that includes activated charcoal as claimed because Williamson does not describe or suggest use of a toxic fumigant. Williamson describes "a non-chemical dis-infestation chamber" where a commodity is loaded into bins and then loaded into the treatment chamber. Heated air is then forced through the commodity to kill insects. Williamson has no reason to consider the using an absorptive device as claimed because he does not use toxic fumigants and is not concerned about release of fumigant.

Smithyman does not describe a fumigation system with an activated charcoal absorption device.

Given that neither Otsuki nor Williamson describe the use of a toxic fumigant, there is no reason for a person of ordinary skill in the art to look towards Smithyman. Smithyman describes a non-mobile phosphine fumigation system and does not describe or suggest a fumigation apparatus that is portable or could be made portable. The use of ISO shipping containers as claimed is not described. Further, Smithyman does not describe or suggest an absorption device that includes activated charcoal. One of ordinary skill would have no reason to use an absorption device that includes activated charcoal to remove phosphine. Hence, even if Smithyman is combined with Otsuki and Williamson, none of the references alone or in combination describe or suggest a mobile fumigation system using toxic fumigant and having an absorptive device that includes activated charcoal as claimed.

Haraguchi does not describe a mobile fumigation system.

Again, given that neither Otsuki nor Williamson describe the use of a toxic fumigant, there is no reason for a person of ordinary skill in the art to look towards Haraguchi. Haraguchi describes a non-mobile system for treatment of methyl bromide waste gas. The use of ISO shipping containers as claimed is not described. None of the references alone or in combination describe or suggest a mobile fumigation system that uses toxic fumigant and has an absorptive device that includes activated charcoal as claimed.

Claim 29 is not obvious over Otsuki et al. in view of Williamson, Smithyman and Haraguchi and further in view of Imagawa or Washburn or Black.

As indicated above, Williamson, Smithyman and Haraguchi do not describe or suggest a mobile fumigation system that uses toxic fumigant and has an absorptive device that includes activated charcoal as claimed. Imagawa, Washburn and Black do not describe toxic fumigants and an absorptive device that includes activated charcoal. More specifically, Imagawa, Washburn and Black are discussed below.

Imagawa does not describe or suggest toxic fumigant or an absorptive device that includes activated charcoal as claimed. Imagawa describes a steam treatment system for killing insects on fruits. Imagawa does not describe an absorptive device since he does not use toxic fumigants. Again, there no reason for a person of ordinary skill in the art to look towards Imagawa, since Imagawa does not use toxic fumigant.

Washburn does not not describe or suggest toxic fumigant or an absorptive device that includes activated charcoal as claimed. Washburn describes a system for circulating heated air through a container. Washburn does not describe an absorptive device since he does not use toxic fumigants. Again, there no reason for a person of ordinary skill in the art to look towards Washburn, since Washburn does not use toxic fumigant.

Black has nothing to do with fumigation at all. Black describes a mechanized carrier for moving freight in and out of a trailer. One of ordinary skill would have not reason to look to Black, since Black has nothing to do with fumigation.

Claims 36 and 37 is not obvious over Otsuki et al. in view of Williamson, Smithyman and Haraguchi and further in view of Yates.

As indicated above, Williamson, Smithyman and Haraguchi do not describe or suggest a mobile fumigation system that uses toxic fumigant and has an absorptive device that includes activated charcoal as claimed. Yates does not describe a mobile

Application No. 09/980,676

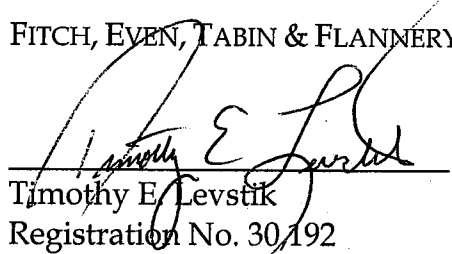
fumigation system at all as the Yates system includes a fumigation chamber. An ISO general purpose shipping container as claimed is not described.

Allowance of the pending claims is respectfully requested. The Commissioner is hereby authorized to charge any additional fees which may be required with respect to this communication, or credit any overpayment, to Deposit Account No. 06-1135.

Respectfully submitted,

FITCH, EVEN, TABIN & FLANNERY

Dated: November 19, 2010


Timothy E. Levstik
Registration No. 30,192

120 South LaSalle Street, Suite 1600
Chicago, Illinois 60603-3406
Telephone (312) 577-7000
Facsimile (312) 577-7007